

Section II: Remarks

The pending claims are claims 1-14. Claim 1 was amended to clarify the teaching, not to overcome a rejection under Chapter 35 of the United States Code.

Rejection of Claims and Transversal Thereof

In the November 10, 2008 Office Action:

claims 1-4, 8 and 10-11 were rejected under 35 U.S.C. §102(b) as being anticipated by Nguyen (U.S. Patent No. 6,177,182);

claims 5-7, 9 and 13-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nguyen; and

claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Nguyen in view of Tao et al. (U.S. Patent No. 6,939,663).

These rejections are respectfully traversed. The patentable distinctions of the pending claims over the cited references are set out in the ensuing discussion.

Rejections under 35 U.S.C. §102(b)

In the November 10, 2008 Office Action, claims 1-4, 8 and 10-11 were rejected under 35 U.S.C. §102(b) as being anticipated by Nguyen (U.S. Patent No. 6,177,182). Applicants traverse such rejection.

According to the Examiner:

“Nguyen discloses a thermally reactive infrared absorption polymer comprising an infrared absorption chromophoric moiety comprising derivatives of indole cyanine dye and benz[e]-indole cyanine dye, which is bonded to the backbone of an alkali-soluble phenolic resin. [] Further, Nguyen discloses indole cyanine dye such as ADS810PO and benz[e]-indole cyanine dye such as ADS805PO, which meets the limitations of the instant application of salts of indole cyanine dye and benz[e]-indole cyanine dye.”

It is well established, as a matter of law, that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Further, to be anticipatory, the elements in the prior art reference must be arranged as required by the claim. See, *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990).

Applicants' claim 1 recites:

"A near infrared absorption polymer comprising at least two different pendent infra-red chromophoric moieties covalently bonded to the backbone of an alkali-soluble resin, wherein at least one of the pendent infra-red chromophoric moieties is an indole cyanine dye and the other of which is a benz[e]-indole cyanine dye."

Comparing Nguyen with applicants' claimed invention, it can be seen that Nguyen does not teach a near infrared absorption polymer comprising at least two different pendent infra-red chromophoric moieties covalently bonded to the backbone of an alkali-soluble resin, wherein at least one of the pendent infra-red chromophoric moieties is an indole cyanine dye and the other of which is a benz[e]-indole cyanine dye. Instead, Nguyen teaches a polymer comprising either an indole cyanine dye OR a benz[e]indole cyanine dye, not both dyes covalently bonded to the same backbone of an alkali-soluble resin. In other words, Nguyen does not anticipate applicants' claim 1 because the dyes disclosed in Nguyen are not arranged as required by applicants' claims.

Accordingly, it is submitted that claim 1, nor claims 2-4, 8 and 10-11, which depend directly or indirectly on claim 1, is anticipated by Nguyen. Therefore, applicants respectfully request the withdrawal of the rejection under 35 USC §102.

Rejections under 35 U.S.C. §103(a)

1. In the November 10, 2008 Office Action, claims 5-7, 9 and 13-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nguyen. Applicants traverse such rejection.

Nguyen discloses lithographic printing plates consisting of a substrate plate comprising a coating of a near infrared absorption polymer of general Formula I. More particularly, said polymer corresponds to Formulas II to V, in which R₂ indicates a near infrared absorption chromophoric moiety such as an indole derivative or a benz[e]-indole derivative **which** can be represented according to Formula VI. As discussed hereinabove, the polymers defined in the presently claimed invention differ from those disclosed in Nguyen in that they comprise at least two different pendent infra-red chromophoric

moieties covalently bonded to the backbone of an alkali-soluble resin, wherein at least one of the pendent infra-red chromophoric moieties is an indole cyanine dye and the other of which is a benz[e]-indole cyanine dye.

In this sense, the use of an alkaline soluble polymer having two distinct chromophores attached directly to the polymer backbone gives an unexpected and significant improvement in the thermal stabilization time of the precursor in such a way that a further process is not necessary, as clearly shown in the examples of the present description. Therefore, the technical effect of the present invention is the improvement of the stabilization time of the plate precursor during manufacture, without the need for a post-manufacture conditioning process stage (see paragraphs [0025, 0026] of the present application).

In the pending Office Action the Examiner has referred to Example 16 in an attempt to show that “Nguyen recognizes that a mixture of two different cyanine dyes can be combined at different weight ratios.”

However, example 16 discloses the dissolution of two different, previously synthesized, absorption polymers (ADS830PO from Example 1 and ADS815PO from Example 12) in a solvent to produce a coating solution and the coating solution is subsequently spin coated on a surface and dried to make a film. Therefore, the produced coating consists of a mixture of two polymers, each one comprising one benz[e]-indole derivative, in contrast to the present claimed invention which has one polymer having at least two different pendent infra-red chromophoric moieties covalently bonded to the backbone of an alkali-soluble resin, wherein at least one of the pendent infra-red chromophoric moieties is an indole cyanine dye and the other of which is a benz[e]-indole cyanine dye.

It is respectfully submitted that said example 16 of Nguyen as a whole neither proposes to attach simultaneously two different chromophores to the backbone of an alkali-soluble resin nor suggest that said attachment of both chromophores affords a better precursor stabilization. In fact, Nguyen is faced with a different technical problem since it is mainly directed to achieve long-life printing plates, avoiding phase separation of the ingredients in the coating formulation.

Further, the description of the present invention provides examples confirming the unexpected improvement of the stabilization time of the plate precursor when a polymer comprising at least two classes of chromophoric moieties is used. As shown in table 1, the use of a polymeric dye containing two different chromophores (example 1) results in a better stabilization time of the plate precursor over the polymers containing only one chromophore, whether the indole or benz[e]-indole cyanine dye (comparative examples 3 and 2, respectively). Moreover, the enhancement also occurs relative to

a composition resulting from the blend of the two polymeric dyes, one comprising an indole cyanine dye and the other a benz[e]-indole cyanine dye (comparative example 4). In addition to a decrease in the time needed for stabilization, the claimed polymers of the invention also provide a comparable sensitivity.

The results provided by table 1 of the present invention highlight that it would not have been obvious to modify the polymers disclosed in Nguyen, as illustrated by the composition disclosed in the example 16, in order to arrive at the presently claimed invention. Specifically, comparative example 4 of the present description, i.e., when a blend of the two polymeric dyes from examples 2 and 3 is used, affords the longest times of stabilization. Since such blend provides less advantages over the respective polymeric dyes taken alone (i.e., comparative examples 2 and 3), a person skilled in the art would have never expected an enhancement in the stabilization time due to the simultaneous presence of two distinct chromophores attached to only one polymer.

Accordingly, there is no reason for one skilled in the art considering Nguyen to go in the direction of applicants' claimed invention and as such, applicants' claimed invention is non-obvious in view of Nguyen. Withdrawal of the rejection of claims 5-7, 9 and 13-15 as being obvious in view of Nguyen is respectfully requested.

2. In the November 10, 2008 Office Action, claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Nguyen in view of Tao et al. (U.S. Patent No. 6,939,663) (hereinafter Tao). Applicants traverse such rejection.

As introduced hereinabove, Nguyen does not anticipate nor make obvious applicants' claimed invention. Tao does not cure these deficiencies. Specifically, Tao does not motivate, teach or suggest a near infrared absorption polymer comprising at least two different pendent infra-red chromophoric moieties covalently bonded to the backbone of an alkali-soluble resin, wherein at least one of the pendent infra-red chromophoric moieties is an indole cyanine dye and the other of which is a benz[e]-indole cyanine dye. Indeed, Tao is solely concerned with water soluble novolaks and their use in on-press developable plate precursors (no alkaline development needed).

Accordingly, there is no reason for one skilled in the art considering Nguyen in view of Tao to go in the direction of applicants' claimed invention and as such, applicants' claimed invention is non-obvious in view of Nguyen and Tao. Withdrawal of the rejection of claim 12 as being obvious in view of Nguyen and Tao is respectfully requested.

Petition for Extension of Time/Fees Payable

Applicants hereby petition for a two (2) month extension of time, extending the deadline for responding to the November 10, 2008 Office Action from February 10, 2008 to April 10, 2008. The fee of \$245.00 specified in 37 CFR §1.17(a)(2) for such two (2) month extension is hereby enclosed.

The total fee of \$245.00 is being paid by Electronic Funds Transfer. Authorization is hereby given to charge any deficiency in applicable fees for this response to Deposit Account No. 13-4365 of Moore & Van Allen PLLC.

Conclusion

Based on the foregoing, claims 1-14 are in form and condition for allowance. If any additional issues remain, the Examiner is requested to contact the undersigned attorney at (919) 286-8000 to discuss same.

Respectfully submitted,

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By:


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